

REMARKS

Claims 1 and 3-40 are pending in the present application. Claims 1 and 3-40 have been rejected. No claim has been allowed. Claims 1 and 40 have been amended herein only to correct obvious errors with respect to that which is being claimed. No claims have been canceled. No new claims have been added.

The Final Office Action mailed May 7, 2009 has been carefully considered by Applicants. Reconsideration in view of the foregoing amendments and following remarks is respectfully requested.

I. Interview Summary

The Examiners are hereby acknowledged and thanked for the courtesy extended during the telephonic interview of July 21, 2009 between Examiner Vani Gupta, Examiner Long Le and the undersigned attorney. The Final Office Action, recited prior art and pending claims were all discussed, with particular emphasis on claims 1, 21 and 40, as well as that which is taught by U.S. Patent Nos. 5,865,754 to Sevick-Muraca et al. ("Sevick-Muraca") and 5,867,250 to Baron ("Baron I"). In addition, the Examiner introduced a new prior art reference, U.S. Patent No. 4,761,071 to Baron ("Baron II"). Agreement was not reached with respect to the patentability of any claim. Suggestions were made with respect to various claim amendments, and such claim amendments have been made herein.

II. Rejections Under 35 U.S.C. § 103

Claims 1 and 3-40 all stand rejected under 35 U.S.C. §103(a) as being obvious. Claims 1, 3, 4 and 26-34 are rejected over Sevick-Muraca in view of Baron I. Claims 5-10, 16-20 and 35-40 are rejected over Sevick-Muraca in view of Baron I, in further view of U.S. Patent No. 6,615,063 to Ntziachristos et al. ("Ntziachristos"). Claims, 11-15 and 21-25 are rejected over

Sevick-Muraca in view of Baron I, in further view of Ntziachristos, even further in view of U.S. Patent No. 7,263,157 to Bruder et al. (“Bruder”). In particular, the Final Office Action states, “Sevick-Muraca discloses . . . (a) obtaining a topographical surface representation,” also asserts, “Baron [I] establishes relationship between the topographical surface representation and surface light emission data (col. 5, lines 5-27),” and then also states, “[I]t would have been prima facie obvious to modify Sevick-Muraca with Baron to include a establishing a relationship between a surface topography and light emission data of a mammal.” Applicants respectfully traverse.

In order for a proffered combination of references to render a claim as obvious, the combination of references must teach or reasonably suggest every material limitation of the claim. Claim 1 recites, *inter alia*, “obtaining a topographical surface representation of the mammal.” Each mammal has a different topography and thus a different three-dimensional topographical surface representation. On the other hand, Sevick-Muraca teaches the use of a reference having a constant surface, namely a circular tissue phantom (see, *e.g.*, FIG. 3; col. 7, lines 49-50). A tissue phantom refers to a plastic imaging test device that remains the *same* for all tests. It is used for simplified testing, where the surface of the subject is the same and remains constant for all tests, as taught in Sevick-Muraca. Applicants respectfully submit that the response to this point at page 7 of the Final Office Action misapplies that which is taught by Sevick-Muraca to the claim element at issue. The “embedded heterogeneity” 302 of Sevick-Muraca does not suggest or require “obtaining a topographical surface representation of the mammal,” which surface representation of the mammal corresponds to the outer circumference of phantom background 303, and has little to do with the details of embedded heterogeneity 302. Thus, Sevick-Muraca does not obtain “a topographical surface representation of the mammal” as recited in Claim 1. Accordingly, the pending §103 rejection of claim 1 fails for at least this reason.

In addition, the Final Office Action is incorrect in stating that Baron I establishes any relationship between the topographical surface representation and surface light emission data. In

fact, Baron I is directed at optically mapping front and back surface topographies of an object. A careful read of the referenced passage of Baron I (*i.e.*, col. 5, lines 5-27) finds no support for this assertion. Considering the reference as a whole, Applicants respectfully submit that Baron I does *not* establish any relationship between a topographical surface representation and surface light emission data for a light source distribution located inside a mammal. Accordingly, the pending §103 rejection of claim 1 fails for at least this separate and additional reason.

Still further, the Final Office Action improperly assumes that there is any reason to modify Sevvick-Muraca in the manner contemplated to arrive at the pending claims, much less that it is obvious to do so by combining Baron I or any other topography reference therewith. Sevvick-Muraca teaches the use of a *two-dimensional* reference circle having a constant surface, such as that which is shown in FIG. 3 and described as a circular tissue phantom (Col. 7, lines 49-50). Sevvick-Muraca simply does not deal with varying surface representations, much less varying three-dimensional surface representations. As such, Sevvick-Muraca has no reason to “reconstruct[] a three-dimensional representation of the light source distribution internal to the mammal *using [a] topographical surface representation* and the surface light emission data,” as recited in Claim 1. One of skill in the art would have no reason in the first place to combine any reference with Sevvick-Muraca for such a purpose. The proffered combination of references is thus improper as an initial matter. Such a conclusion is inevitable regardless of whether Baron I or Baron II is combined with Sevvick-Muraca. Accordingly, the pending §103 rejection of claim 1 fails for at least this separate and additional reason.

Applicants respectfully submit that the §103 rejection of claim 1 fails for at least the foregoing reasons. Because all other claims depend from claim 1, the §103 rejections of all other claims fail for at least the same reasons. Accordingly, Applicants respectfully request the withdrawal of the §103 rejections of all claims.

Dependent Claims

Each of claims 3-40 depends from independent claim 1. As such, it is respectfully submitted that all of these claims are allowable at least on a dependent claim basis from an allowable independent claim.

Furthermore, it is respectfully submitted that various dependent claims are also allowable over the prior art of record for additional reasons. For example, no specific bases are provided as to how the added limitations of any of claims 3, 4, and 26-34 are met by the proffered combination of Sevick-Muraca and Baron I. Accordingly, no *prima facie* basis for rejection has been provided for at least claims 3, 4, and 26-34. The rejections of other dependent claims have similarly been made with scant description as to how the recited prior art teaches or suggests the added limitations of these claims. For example, claims 6-9, 16-20 and 35-40 are summarily dismissed in such a manner. Applicants respectfully submit that the rejections of these claims are improper for at least this additional reason.

CONCLUSION

Applicants respectfully submit that all claims are in proper form and condition for patentability, and thus request a Notification of Allowance to that effect. It is believed that no fees are due at this time. Should any fee be required for any reason related to this document, however, then the Commissioner is hereby authorized to charge such fee or fees to Deposit Account No. 50-4481, referencing Docket No. XENOP009. The Examiner is respectfully requested to contact the undersigned attorney at the telephone number below with any questions or concerns relating to this document or application.

Respectfully submitted,
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